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ABSTRACT

Negative affectivity (NA) has been defined as a stable and pervasive individual difference characterized by a disposition to experience aversive emotional states (D. Watson and L. A. Clark, 1984). A brief self-report scale was developed to assess NA. The initial 28-item scale (which included seven items each representing nervousness/calmness, self-dissatisfaction/self-satisfaction, pessimism/optimism, and cynical/trusting attitudes about other people) was administered to two separate samples of undergraduates (N=381 and N=323). Principal components analysis produced a 21-item scale, which did not include any of the cynicism/trust items. Eighty-five subjects completed the revised scale twice, with a 6-week interval. The test/retest correlation for these subjects was 0.88. The congruent validity and discriminant validity of the scale were investigated by correlating the scale with measures of constructs hypothesized to be related or not related to NA, based on prior research. Undergraduate psychology students (N=111) participated in studies indicating that the NA scale significantly correlated with the Taylor Manifest Anxiety Scale, the Eysenck Neuroticism Scale, the Rosenberg Self-Esteem Scales, and the Eysenck Extraversion Scale. As expected, no relation was found between the NA scale and the Remote Associates Test. The NA scale did correlate with the Shipley Vocabulary Subscale, although no explanation is offered for this correlation. One table presents item-scale correlations for the two original samples. (SLD)

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THE DEVELOPMENT OF A SCALE TO MEASURE NEGATIVE AFFECTIVITY

Joseph Stokes & Ira Levin

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The Development of a Scale to
Measure Negative Affectivity

Watson & Clark (1984) reviewed and integrated data from a wide variety of research studies in personality and subjective emotional experience, and discovered consistently high inter-correlations among various measures of negative emotions (i.e., anxiety, hostility, irritability, self-deprecation, sadness, neuroticism). As a result, they proposed that these diverse scales were in fact measuring component parts of a more global trait that they labeled "negative affectivity" (NA). Watson & Clark defined negative affectivity as a stable and pervasive individual difference characterized by a disposition to experience aversive emotional states. "High-NA individuals are more likely to report distress, discomfort, and dissatisfaction over time and regardless of the situation, even in the absence of any overt or objective source of stress" (p. 483). Watson & Clark also reported data from different measures of NA that indicated a significant stability over time. These correlations range from .80 for a three to five month period to .40 for a 30-year test-retest.

Watson & Clark described NA as basically a unitary dimension that is composed of different aspects. Based on their review of the research literature, four primary components seem to emerge. These include an ongoing experience of anxiety/tension, and negative attitudes about oneself, other people, and life in general. Each component can be conceived as a bipolar continuum: nervousness/calmness, dissatisfaction/satisfaction with oneself, cynicism/trust of others, and pessimism/optimism about the future. While different scales exist to measure these separate aspects of NA, no instrument was currently available to assess the more global disposition. Therefore, using other components of NA as a guide, we have developed a brief self-report scale to assess NA.

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Scale Development

An initial pool of 28 items (7 representing each component: nervousness/calmness, self-dissatisfaction/self-satisfaction, pessimism/optimism and cynical/trusting attitudes about other people) was written to have face validity. This 28-item scale was then given to two separate samples of undergraduate students (N=381 and N=323). The NA scale used a 6-point Likert format in which subjects were asked to rate the extent to which they agreed or disagreed with each of the 28 items. This scale contained approximately an equal number of positively and negatively worded statements to minimize the effects of subject response sets. A total negative affectivity score was computed for each subject based on a simple sum of responses.

A principal components analysis of the 28-item NA scale based on the first sample yielded seven components with eigenvalues greater than one. However, the only large difference between eigenvalues occurred between Component One (eigenvalue = 6.4) and Component Two (eigenvalue = 2.5). Component Two comprised the seven cynicism/trust items. The 15 items loading .45 or greater on Component One represented a fairly equal mix of the other three NA aspects (nervousness/calm, pessimism/optimism, self-dissatisfaction/self-satisfaction). These 15 items were used as a core group from which a scale was developed. Each of the remaining 13 items was correlated with this 15-item core group and the single item having the highest correlation was added to the scale. Coefficient alpha was computed each time an item was added. This procedure was continued until adding items no longer increased alpha. This method produced a 21-item scale which did not include any of the cynicism/trust items. Coefficient alpha for this scale was .87.

This exact procedure was carried out on the second sample in order to cross validate these findings. Highly similar results were found. The components

analysis for Sample 2 again produced seven components with eigenvalues greater than one. As in Sample 1 the only large difference was between Componcnt One (eigenvalue = 5.6) and Component Two (eigenvalue = 2.8). Component Two again included the seven cynicism items. Component One contained 14 of the 15 items that made up Component One in Sample 1. The single item that failed to load .45 on Component One in Sample 2 was the first to be added to the core scale based on its correlation with the other 14 items. The scale building procedure produced the same 21-item scale with an alpha of .84. The items and the item-total correlations with the item deleted from the scale for Samples 1 and 2 are shown in Table 1.

Eighty-five subjects completed the scale a second time six weeks after the original testing. The test-retest correlation for these subjects was .88.

Validity Studies

Congruent and discriminant validity of the scale was investigated by correlating the NA scale with measures of constructs hypothesized to be related/unrelated to negative affectivity based on prior research. Watson & Clark (1984) suggested that the Taylor Manifest Anxiety Scale (Taylor, 1953) and the neuroticism scale of the Eysenck Personality Inventory (Eysenck & Eysenck, 1975) could be considered as alternate measures of NA due to their high correlations with various other measures of negative affect. They also reported significant covariation between measures of self-esteem/self-concept and NA. Other research Watson and Clark reviewed indicated that high-NA people were characterized as more introspective than low-NA people, while low-NA people were described as more gregarious and socially facile. As a result, we hypothesized that the 21-item NA scale would be positively correlated with the Taylor Manifest Anxiety Scale and the Eysenck Neuroticism Scale, and negatively correlated with the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and the

Eysenck Extraversion Scale. Since there was no theoretical or empirical basis for associating NA with creativity or intelligence, we hypothesized that the NA scale would not correlate with the Remote Associates Test (1967), a measure of creativity, or with the Shipley Institute of Living Vocabulary Subscale (Shipley, 1940), a measure of intellectual achievement.

Subjects for these construct validity studies were undergraduate psychology students. They met with the researcher in groups of 15 to 20 and completed a questionnaire booklet containing the Negative Affectivity Scale and a subset of the following measures: the Rosenberg Self-Esteem Scale, the Shipley Vocabulary Subscale, the Remote Associates Test, the Taylor Manifest Anxiety Scale, and the Eysenck Personality Inventory.

As hypothesized the NA scale correlated significantly with the Taylor Manifest Anxiety Scale (r=.64, p<.0001, N=100), the Eysenck Neuroticism Scale (r=.60, p<.0001, N=111), the Rosenberg Self-Esteem Scale (r=-.74, p<.0001, N=84), and the Eysenck Extraversion Scale (r=-.38, p<.0001, N=111). As expected no relation was found between the NA scale and the Remotes Associates Test (r=.001, N=105). However, a significant relation was found between the NA scale and the Shipley Vocabulary Subscale (r=-.30, p<.001, N=111).

At this time we do not understand why the NA scale would correlate with the Shipley. We are currently collecting additional data that will provide further evidence about the validity and the limitations of the NA scale. In the studies we conduct this winter (1988) we will include the Shipley and other measures of intelligence and intellectual achievement in an effort to understand the relation of the NA measure to measures focusing on the intellectual domain.

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TABLE 1
ITEM-SCALE CORRELATIONS

		Sample 1 N=381	Sample 2 N=323
1.	After an embarrasing experience I worry about it for days	.46	.44
*2.	I know that things will continually improve in my life	.54	.42
*3.	I feel that I have a great deal to be proud of	.47	.45
4.	I often feel restless and jittery for no apparent reason	.47	.42
5.	Things rarely work out the way I want them to	.54	.51
6.	I am not as well liked as most other people	.48	.46
*7.	Everyday seems exciting, new, and different	.40	.34
8.	My feelings are more easily hurt than most other people	.31	.36
*9.	I can easily concentrate on things for as long as I like	.32	.24
10.	Whenever someone criticizes me I think about it for days	.51	.46
*11.	I am hopeful and optimistic about the future	.60	.50
12.	When things go wrong I blame myself	.37	.36
*13.	I rarely lose sleep over worrying about something	.29	.30
*14.	I am a person of worth, at least as good as other people	.43	.31
15.	I always expect the worst to happen	.54	.51
*16.	I am more content and happy than most other people	.36	.41
17.	Happy endings only occur in the movies and in fairy tales	.48	.42
18.	I am not as self-confident as most other people	.36	.46
19.	When I meet people for the first time I am tense and uptight	.44	.46
20.	If I could live my life over I would do many things differently	.34	.31
21.	The future seems rather bleak and unpromising	.63	.53

Note: Correlations of the items with the sum of all other items are reported here. Items marked with an asterisk are reverse scored.